

CLAIMS

1. Method for identifying a communication interface of an electronic unit attached to a connector of an electronic device, comprising the steps of:
 - 5 - generating a voltage pulse in said device on a pin of said connector;
 - measuring the voltage on said pin, as affected by a load in said unit;
 - comparing the measured voltage with predetermined voltage criteria; and
 - performing communication interface identification of said unit dependent on said comparison.
- 10 2. The method as recited in claim 1, wherein said step of performing identification is preceded by the step of:
 - selecting identification process dependent on the value of said measured voltage.
- 15 3. The method as recited in claim 1 or 2, wherein said step of performing identification is preceded by the step of:
 - selecting identification process dependent on predetermined timing criteria.
- 20 4. The method as recited in claim 1, wherein said step of performing identification comprises the steps of:
 - measuring dynamic behaviour of said voltage level; and
 - allotting an identification address to said unit dependent on said dynamic behaviour.
- 25 5. The method as recited in claim 4, wherein said step of measuring dynamic behaviour comprises the steps of:
 - measuring a time period during which said voltage holds a stable level; and
 - measuring the value of said stable voltage level.
- 30 6. The method as recited in claim 5, wherein said identification address is determined by the length of said time period and the magnitude of said voltage level

value.

7. The method as recited in claim 5, wherein said identification address comprises two nibbles, one address nibble being selected dependent the length of said time
5 period and one other nibble being selected dependent on the magnitude of said voltage level value.

8. The method as recited in claim 5, wherein said identification address is a two
10 nibble hexadecimal number which is set dependent on predetermined time and voltage ranges.

9. The method as recited in claim 7, wherein a predetermined number is selected for said one address nibble if the length of said time period exceeds a predetermined maximum time period.

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10. The method as recited in claim 2, comprising the step of:

- monitoring a control bus of said connector for a predetermined time period, dependent on if said measured voltage level meets predetermined criteria for digital attachable units.

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11. The method as recited in claim 10, wherein said predetermined criteria for digital attachable units is a maximum threshold voltage level.

12. The method as recited in claim 10, in the event of data communication being
25 detected over said control bus during said time period, comprising the step of:
- performing digital identification of said unit.

13. The method as recited in claim 10, in the event of no data communication being detected over said control bus during said time period, comprising the step of:
30 - allotting an identification address comprising two nibbles to said unit, one address nibble for which a predetermined number is selected, and one other nibble for

which a number is selected dependent on the magnitude of said voltage level value.

14. The method as recited in claim 1, comprising the step of:

- repeatedly generating said voltage pulse with a predetermined repetition
5 frequency.

15. The method as recited in claim 1, comprising the steps of:

- repeatedly generating said voltage pulse with a predetermined repetition frequency
characteristic; and
- 10 - adapting said repetition frequency to a mode of operation for said connector, by
applying a first repetition frequency in an idle mode for said connector; and by
applying a second repetition frequency, higher than said first repetition frequency,
in an active mode for said connector, with an attached unit.

15 16. The method as recited in claim 1, wherein said step of performing identification
includes the step of allotting the unit an identification address, the method further
comprising the step of:

- accessing a data memory using said identification address for retrieving
operational data associated with said unit.

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17. The method as recited in claim 16, wherein said data memory is located in said
electronic device.

18. The method as recited in claim 16, wherein said data memory is located in said
25 electronic unit.

19. The method as recited in claim 16, comprising the steps of:

- establishing a connection over a communication network for accessing said
memory; and
- 30 - downloading operational data relating to said unit to said electronic device.

20. The method as recited in claim 16, comprising the step of:
- making adjustments dependent on the attached electronic unit to said electronic device, based on said operational data.
- 5 21. The method as recited in any of the preceding claims, wherein said electronic device is a radio communication terminal, and said electronic unit is an accessory which is attachable to said radio communication terminal.
22. The method as recited in any of the preceding claims, wherein said identity is
10 representative of a class of electronic units.
23. The method as recited in any of the preceding claims, wherein said identity is unique for said electronic unit.
- 15 24. Computer program product, comprising computer program code stored in memory means, which is executable by means of a micro processor in an electronic device for performing the steps according to any of the previous claims 1 - 22.
25. Electronic unit having a communication interface comprising a first connector
20 attachable to a system connector of an electronic device, **characterised in that** said communication interface comprises an electronic circuit connected to said first connector, which electronic circuit constitutes an electric load which is selected to represent an identity for said communication interface.
- 25 26. The electronic unit as recited in claim 25, **characterised in that** said circuit comprises a resistive component, wherein said identity is dependent on the ohmic resistance of said resistive component.
27. The electronic unit as recited in claim 25 or 26, **characterised in that** said
30 circuit comprises a capacitive component, wherein said identity is dependent on the dynamics of said circuit.

28. The electronic unit as recited in claim 26 and 27, **characterised in that** said circuit is devised to generate a dynamic load, when subjected to a voltage from an attached electronic device, which load holds a substantially stable voltage level over
5 said connector for a predetermined time period, and then triggers said voltage to rise.

29. The electronic unit as recited in claim 28, **characterised in that** said identity is determined by the duration of said predetermined time period and said voltage level.
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30. The electronic unit as recited in any of the previous claims 25 to 29, **characterised in that** said electronic unit comprises a second connector to which said circuit is connected, to which second connector an additional electronic unit electronic unit may be cascadably attached.

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31. The electronic unit as recited in any of the previous claims 25 to 30, **characterised in that** said electronic unit is an accessory which is attachable to an electronic device in the form of a radio communication terminal.

20 32. The electronic unit as recited in any of the previous claims 25 to 31, **characterised in that** said identity is representative of a class of electronic units.

33. The electronic unit as recited in any of the previous claims 25 to 31, **characterised in that** said identity is unique for said electronic unit.

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34. An electronic circuit, for use in an electronic unit having a first connector attachable to a system connector of an electronic device, **characterised in that** said circuit is devised to generate a dynamic load when subjected to a voltage from an attached electronic device, which load is representative of the identity of a
30 communication interface of said electronic unit.

35. The electronic circuit as recited in claim 34, **characterised in** that said circuit comprises a transistor, a resistive component, and an RC component, wherein said transistor controls current from the electronic device to the resistive component which initially generates a substantially stable voltage level for a predetermined
5 time period, where after said RC circuit triggers said voltage to rise.

36. The electronic circuit as recited in claim 35, **characterised in** that said time period is dependent on the characteristics of said transistor, and in that said transistor is contained on an ASIC.